

REMARKS

Claims 1-30 are pending. Applicant respectfully requests reconsideration and allowance of this application.

Rejections under 35 USC 103(a) – Kram and the Derfler book

Claims 1, 3-7, 9-14, 17-22, and 24-29 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent 6,314,531 to Kram (hereinafter “Kram”) in view of Derfler et al., How Networks Work (hereinafter “the Derfler book”). Applicant respectfully submits that claims 1, 3-7, 9-14, 17-22, and 24-29 are patentable over Kram and the Derfler book.

Claim 1 recites:

A computer functioning as a computer-based network switch, comprising:
a first network adapter for connecting to an external network;
a plurality of second network adapters each for forming a connection with a network server in a private network;
a switching component for receiving network communication data from the external network through the first network adapter and directing the received network communication data to the second network adapters for transmission to the respective network servers in the private network connected thereto; and
a test control component for selectively disabling the second network adapters to create connection failure conditions of the connections between the second network adapters and the respective network servers in the private network connected thereto.

Thus, the computer recited in claim 1 functions as a computer-based network switch and comprises multiple network adapters. At least one of these adapters is for connecting to an external network. Each of the other adapters is for forming a connection with a network server in a private network. The switching component of the computer is configured to direct communication data from the external network to the network servers. The test control component is configured to create failure conditions of connections to the network servers by

selectively disabling the network adapters. Kram discloses neither the components nor the functionalities of the computer recited in claim 1.

Instead, Kram merely describes an emulator of network conditions during software testing and debugging. A workstation (103) running emulation software is configured to serve as an intermediary for data packets sent between workstations (101, 105) that are running software being tested or debugged. (See Kram, col. 4, lines 40-61; FIG. 1). Messages targeted for the testing workstations (101, 105) are redirected to the emulation workstation (103) using a Medium Access Control (MAC) address table. (See Kram, col. 3, line 62 to col. 4, line 18; FIG. 2).

Although Kram describes an emulator of network conditions, nothing in Kram describes configuring the emulator to function as a computer-based network switch. In contrast, Kram specifies that the emulation workstation be connected to a switch. (See Kram, col. 4, lines 21-30). Furthermore, Kram illustrates positions (E1-E3) where emulators can be placed in a network. (See Kram, FIG. 3). All of these positions show that the emulators are to be connected to switches. However, none of the emulators is shown in the figure as a switch. Thus, Kram does not disclose or suggest a testing computer that includes a switching component and functions as a computer-based network switch, as recited in claim 1.

Kram also fails to disclose or suggest a computer-based network switch having a network adapter for connecting to an external network and multiple network adapters for connecting to servers in a private network. Kram describes an emulator that receives redirected messages between two workstations in a network. (See Kram, FIG. 1 and 2). However, Kram does not disclose or suggest a computer that has multiple network adapters

for connecting to both an external network and servers in a private network, as recited in claim 1.

Kram further fails to disclose or suggest a test control component for selectively disabling the network adapters to create connection failure conditions. Although Kram describes an emulator that receives data from other workstations, the emulator does not need multiple network adapters since the emulator is not functioning as a switch. Without the switching functionalities, the emulator described in Kram cannot create connection failure conditions of the connections between network adapters and their respective network servers in the private network by selectively disabling the network adapters. Thus, the emulator described in Kram is not equivalent to the computer having the testing component, as recited in claim 1.

The Office Action acknowledges that Kram fails to explicitly teach the tested element being a switch between an external network and a private network. But the Office Action argues that the Derfler book teaches that the switching between LANs and WANs is well known in the art. (See Office Action, page 2, paragraph 4). As discussed above, because the emulator described in Kram is not a switch, the emulator is not able to perform the functions that can be performed by the test control component of the computer, as recited in claim 1. In particular, the test control component is configured to create connection failure conditions of the connections between network adapters and their respective network servers in the private network by selectively disabling the network adapters. The emulator in Kram simply cannot perform the same function. Thus, although the Derfler book describes a switch, the Derfler book does not cure the deficiencies of the emulator in Kram as stated above.

Neither Kram nor the Derfler book includes any motivation to combine the two references. However, even if the references can be combined, the combination being proposed is merely a network emulator connected to a switch. This proposed combination still does not disclose or suggest the subject matter recited in claim 1.

For at least the above-identified reasons, Applicant respectfully submits that claim 1 is patentable over Kram and the Derfler book, alone or in combination, and is allowable. Given that claims 2-8 depend from claim 1, claims 2-7 are also allowable for at least the same reasons.

Claim 9 recites:

A computer-readable medium having computer-executable components for controlling a plurality of network adapters in a computer to create test conditions for testing network servers in a private network, the network servers connected to the network adapters, comprising:

a switching component for receiving network communication data from an external network and directing the received network communication data to the network adapters for transmission to the respective network servers in the private network connected thereto;

a test control for selectively disabling the network servers to create connection failure conditions for connections between the network adapters and the respective network servers in the private network connected thereto.

As discussed above, Kram describes an emulator of network conditions for testing software and the Derfler book describes a switch. Neither Kram nor the Derfler book discloses or suggests a mechanism for selectively disabling network servers to create connection failure conditions for connections between network adapters and the respective network servers in a private network. Thus, for at least the reasons stated above, Applicant respectfully submits that claim 9 is patentable over Kram and the Derfler book, alone or in

combination, and is allowable. Given that claims 10-14 depend from claim 9, claims 10-14 are also allowable for at least the same reasons.

Claim 17 recites:

A system for testing network servers in a private network, comprising:
a computer functioning as a computer-based network switch, including a plurality of network adapters for forming connections to the network servers, a switching component for receiving network communication data from an external network and directing the received network communication data to the network adapters for transmission to the respective network servers in the private network connected thereto, and a test control for selectively disabling the network adapters;
a plurality of client computers connected to the external network for communication with the network servers in the private network through the computer-based network switch;
a server testing controller connected to the external network for coordinating testing of the network servers, including instructing the client computers to send network communication data to the network servers in the private network through the computer-based network switch, and causing the test control to selectively disable the network adapters to create connection failure conditions of the connections between the network adapters and the network servers in the private network connected thereto.

Thus, the system recited in claim 17 includes a server testing controller for coordinating testing of network servers. The server testing controller interacts with multiple client computers and a computer-based network switch to create failure conditions of the connections between network adapters in the computer-based network switch and the network servers.

As discussed above, neither Kram nor the Derfler book discloses or suggests a computer that functions as a computer-based network switch and includes multiple network adapters for forming connections to network servers. Kram and the Derfler book also fail to disclose or suggest a component in the computer for selectively disabling the network

adapters. Furthermore, the references further fail to disclose or suggest the server testing controller as recited in claim 17.

For the above-identified reasons, Applicant respectfully submits that claim 17 is patentable over Kram and the Derfler book, alone or in combination, and is allowable. Given that claims 18-22 depend from claim 17, claims 18-22 are also allowable for at least the same reasons.

Claim 24 recites:

A method of testing a plurality of network servers in a private network, comprising the steps of:
connecting the network servers to a plurality of network adapters;
receiving network communication data from an external network;
directing the received network communication data to the network adapters for transmission to the respective network servers in the private network connected thereto;
selectively disabling the network adapters to create connection failure conditions of connections between the network adapters and the network servers in the private network connected thereto.

As discussed above, neither Kram nor the Derfler book discloses or suggests selectively disabling network adapters to create connection failure conditions of connections between the network adapters and network servers in a private network. For at least the above-identified reasons, Applicant respectfully submits that claim 24 is patentable over Kram and the Derfler book, alone or in combination, and is allowable. Given that claims 25-29 depend from claim 24, claims 25-29 are also allowable for at least the same reasons.

Rejections under 35 USC 103(a) – Kram, the Derfler book and the Derfler article

Claims 8, 16, 23 and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kram in view of the Derfler book and further in view of Derfler et al., “Crash-Proof”, PC Magazine, April 4, 2000 (hereinafter “the Derfler article”).

As stated above, independent claims 1, 9, 17 and 24 are patentable over Kram and the Derfler book. The Derfler article merely includes a discussion on network load balancing but fails to cure the deficiencies in Kram and the Derfler book. Thus, for at least the same reasons identified above, Applicant respectfully submits that dependent claims 8, 16, 23 and 30 are patentable over Kram, the Derfler book and the Derfler article, alone or in combination, and are allowable.

Serial No.: 09/758,831
Filing Date: 1/11/2001

Docket No.: 150562.01

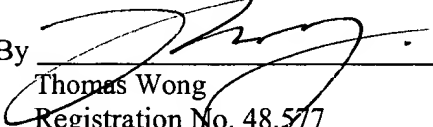
Conclusion

In view of the remarks above, Applicant respectfully submits that this case is in condition for allowance and such allowance is earnestly solicited. In the event that there are any outstanding matters remaining in the above-identified application, the Office is invited to contact the undersigned to discuss this application.

Respectfully submitted,

MICROSOFT CORPORATION

Date: 12/15/2004


By 
Thomas Wong
Registration No. 48,577
Direct Phone No. (425)707-3591

CERTIFICATE OF MAILING OR TRANSMISSION
UNDER 37 C.F.R. § 1.8(a)

I hereby certify that this correspondence is being:

- ☒ deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to:
Mail Stop : AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- ☐ transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at: (703) _____

12-15-04
Date


Signature
Naomi Tovar
Type or Print Name